

ABSTRACT

A method for handover a mobile unit from a first base station to a second base station in a wireless communication systems employing smart antenna technology. Following trigger events of a handover, the mobile station generates a physical signal sounding pulse transmitted by an isotropic antenna. The sounding pulse may consist of a common sequence of symbols or a specific sequence of symbols that uniquely identifies the mobile station. A series of sounding pulses can be sent according to a power ramping procedure until a base station has focused a communications beam toward the mobile. Receiving base stations provide feedback information upon detection of the sounding pulse allowing the mobile unit and/or base station to form communication beams toward each other. A mapping protocol may also be utilized by the communication system.